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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,172	01/16/2001	William J. Dally	2789.2009-000	4912

24319 7590 08/04/2004

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EXAMINER

NGUYEN, BRIAN D

ART UNIT PAPER NUMBER

2661

DATE MAILED: 08/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/761,172

Applicant(s)

DALLY, WILLIAM J.

Examiner

Brian D Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on the amendment filed 5/28/04.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8, 12-16, 20, 24 and 25 is/are rejected.
- 7) ☒ Claim(s) 5-7, 9-11, 17-19 and 21-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 8, 12-15, 20 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins (4,797,589).

Regarding claims 1-3, 8, 12-15, 20 and 24-25, Collins discloses a digital cross connect comprising a plurality of stages each having a plurality of switches receiving a plurality of frames of time multiplexed input data and switching the data in time and space; a frame counter at each switch synchronized to a frame clock; and a master clock to synchronize all elements within the cross connect; wherein propagation of the frame clock is matched to data distribution between the switches and wherein the frame clock is derived from a frame of data; wherein the switch frame counter is aligned to a defined offset from the frame clock (see col. 2, line 62-col. 3, line 9; col. 3, lines 50-65; col. 7, lines 32-57). Collins does not specifically disclose the master clock is the master switch or the master switch is in the middle stage. However, each switch includes a clock is well known and to assign a switch in a middle stage as a master switch is a matter of choice. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have a switch in the middle stage as a master switch in order to synchronize all the switch elements in the cross connect.

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3. Claims 4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins (4,797,589) in view of Thomas (5,761,242).

Regarding claims 4 and 16, Collins discloses all the claimed subject matter as described in previous paragraph except for the frame clock is derived from an A1 byte of SONET frame. However, this feature is well known in the art. Thomas discloses this feature (see abstract). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to derived the frame clock from an A1 byte as taught by Thomas in the system of Collins in order to synchronize all the switch elements in the cross connect.

#### *Allowable Subject Matter*

4. Claims 5-7, 9-11, 17-19, and 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Response to Arguments*

5. Applicant's arguments filed 5/28/04 have been fully considered but they are not persuasive. The applicant argued that Collins refers to a master/slave arrangement of a clock in the paragraph bridging columns 2 and 3. However, there is no suggestion of how that clock is distributed from a master to the slave. In particular, there is no suggestion that the clock be propagated to downstream switches and then from output switches to input switches. More specifically, there is no suggestion of matching propagation of frame clock to data distribution between the switches or to deriving the frame clock from

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a frame of data. Nor is there any suggestion of aligning a frame counter to a defined offset from the frame clock. This argument is not persuasive because how the clock is distributed from the master to the slave is depending how the switches in the digital cross connect are arranged. The clock can be propagated in different directions so that all the switches in the digital cross connect are synchronized. With respect to claims 4 and 16, the applicant argued that although Thomas does refer to the well known A1 and A2 framing bytes of a SONET frame, there is no suggestion that those bytes be used as a mechanism for propagating a frame clock through plural switching stages. This argument is irrelevant because the claims do not claim using those bytes as a mechanism for propagating a frame clock through plural switching stages. The claim merely claims derive the frame clock from A1 byte of a SONET frame. Thomas discloses byte A1 is used for synchronizing. In other words, the frame clock is derived from A1 byte.

### *Conclusion*

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

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advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D Nguyen whose telephone number is (703) 305-5133. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Olms can be reached on (703) 305-4703. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



8/3/04

**BRIAN NGUYEN**  
**PRIMARY EXAMINER**